

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Disease Prevention, Treatment Practices, and Antibiotic Administration Techniques on U.S. Swine Sites

In 2006, the USDA's National Animal Health Monitoring System (NAHMS) conducted a study on swine health and management practices from a random sample of swine production sites in 17 States*. These sites represented 94 percent of the U.S. pig inventory and 94 percent of U.S. pork producers with 100 or more pigs.

Disease prevention and treatment practices

In addition to vaccinating for certain pathogens, sites often use treatment regimens of treatments to prevent and control disease at certain management phases. From June through November 2006, 74.7 percent of sites dewormed sows and gilts and 64.0 percent dewormed boars, which accounted for 60.2 percent of total sows and gilts and 67.8 percent of total boars (table 1).

In preweaned piglets, administration of iron was the most common preventive practice (82.1 percent of sites). About 9 of 10 piglets (92.3 percent) were on sites that administered iron at or before weaning. Over 4 of 10 sites (43.5 percent) gave preweaned piglets antibiotics in feed, but fewer than 1 in 10 piglets (8.7 percent) were on sites that administered antibiotics in feed to piglets.

Over 8 of 10 sites (85.3 percent) used antibiotics in feed for nursery pigs, and more than 9 of 10 of nursery pigs (94.9 percent) were on these sites. The use of antibiotics in feed was a more common preventive practice in nursery and grower/finisher pigs than in breeding animals and piglets.

*States

Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota Texas, and Wisconsin.

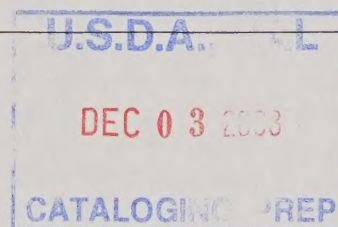


Table 1. For Sites with the Specified Pig Types, Percentage of Sites (and Percentage of Pigs on These Sites) that Regularly Gave the Following Treatments from June through November 2006

Practice	Percent Sites				
	Pig Type				
	Sows/ Gilts	Boars	Piglets*	Nur- sery	Grower/ Finisher
Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Deworm	74.7	64.0	30.0	33.4	30.6
Mange/lice treatment	46.5	43.5	23.0	24.4	12.7
Iron	NA	NA	82.1	NA	NA
Antibiotics in feed	47.4	37.2	43.5	85.3	81.2
Antibiotics in water	3.3	1.3	7.6	40.4	38.6
Antibiotics (oral)	5.0	4.8	14.9	4.2	2.8
Antibiotics (injection)	47.9	27.5	54.9	53.8	56.6
Percent Pigs					
Deworm	60.2	67.8	3.5	5.2	13.3
Mange/lice treatment	13.4	44.7	1.3	2.3	3.1
Iron	NA	NA	92.3	NA	NA
Antibiotics in feed	38.8	30.7	8.7	94.9	86.4
Antibiotics in water	2.7	0.5	2.6	76.2	65.7
Antibiotics (oral)	4.7	3.1	41.5	5.1	5.2
Antibiotics (injection)	35.6	21.2	85.6	76.4	68.4

*Before or at weaning

Antimicrobial administration techniques

From June through November 2006, 38.5 percent of sites gave breeding females occasional short-term treatments via injections of antimicrobials. Injections were rarely used for occasional short-term prevention (pulse dosing), except for piglets, where 18.8 percent of sites used did use injections.

About one-third of sites delivered antimicrobials via injection to breeding females, piglets, nursery pigs and

grower/finisher pigs as an occasional short-term treatment.

For nursery pigs, 53.8 percent of sites administered antimicrobials in feed continuously, while 32.8 percent of sites did so for grower/finisher pigs. Nearly three times as many sites delivered antimicrobials in feed to breeding females as an occasional short-term prevention of disease using pulse dosing compared with giving antimicrobials continuously in feed (30.7 and 10.8 percent of sites, respectively). Conversely, for piglets, about one-fifth as many sites delivered antimicrobials in feed to piglets as an occasional short-term prevention of disease using pulse dosing compared with giving antimicrobials continuously in feed (6.0 and 28.4 percent of sites, respectively) [table 2].

Table 2. For Sites with the Specified Pig Types, Percentage of Sites that Used Antimicrobials in Feed, Water, or by Injection from June through November 2006, by Route of Administration and by Treatment Type

Pig Type	Route	Percent Sites Treatment Type			
		Occasional Short-term Treatment	Occasional Short-term Prevention*	Occasional Individuals or Groups	Contin- uously
		Percent	Percent	Percent	Percent
Breeding females	Feed	17.3	30.7	7.0	10.8
	Water	6.8	2.4	3.0	0.1
	Injection	38.5	4.5	35.7	NA
Boars	Feed	10.3	15.6	6.1	9.8
	Water	3.6	0.1	3.2	0.1
	Injection	18.6	1.9	26.1	NA
Piglets	Feed	14.7	6.0	4.2	28.4
	Water	6.7	8.2	3.5	0.9
	Injection	37.3	18.8	39.9	NA
Nursery-age pigs	Feed	11.8	34.2	2.1	53.8
	Water	32.9	21.6	9.0	0.7
	Injection	31.2	4.4	42.6	NA
Grower/finisher pigs	Feed	31.1	37.8	8.6	32.8
	Water	41.7	9.2	10.8	0.1
	Injection	30.6	0.6	49.5	NA

*Pulse dosing. Increases antibiotic levels in an animal early in the dosing interval, followed by a dose-free period in which antibiotic levels are allowed to diminish until the next dose.

Complete descriptive reports and other information sheets from NAHMS Swine Studies are available at: <http://nahms.aphis.usda.gov>

For more information, contact:

USDA-APHIS-VS, CEAH
NRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
970.494.7000
E-mail: NAHMS@aphis.usda.gov
<http://nahms.aphis.usda.gov>
#N513.0308



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.